Fall 9-1-2018

DDSN 113A.01: Technical Drafting

Brian J. Hoover
University of Montana, Missoula

Missoula College UM
Department of Applied Computing and Engineering Technology
Course Syllabus

DDSN 113 Technical Drafting

Credit: 3
Prerequisite: None
Term: Fall 2018

Meetings:
Tuesday & Thursday 4:00PM to 5:20PM
Missoula College West Campus room MC 234

Faculty Contact:
Brian Hoover - brian.hoover@umontana.edu
Office Hours: Available upon request

Course Description

An introduction to the techniques and standard practices of communicating technical graphics through effective design. The class studies and practices drawing skills and learns the drawing standards that support the needs of the design team in advancing ideas. It also provides the foundation for successful drawing communication in the CAD environment. Topics covered include; drawing media and tools, hand drawing skills, perspectives, views, sketching, standard scales, geometric construction, sections, dimensioning, and tolerances. Demonstrate dexterity in the use of drawing instruments, templates etc. as reflected in neatness and accuracy.

Course Objectives

Upon completion of the course, the student should be able to:

1. Produce accurate drawings according to recognized standards, conventions and illustration techniques.
2. Use graphical methods to solve basic descriptive geometry problems.
3. Learn to select appropriate methods of graphic representation in expressing spatial ideas and concepts
4. Produce orthographic sketches and projections with basic drawing instruments.
5. Understand and use basic sectioning techniques.
6. Understand and practice basic dimensioning standards and styles.
7. Understand the role and standards of tolerances in the drawing practice.

8. Apply technical Drafting principles to many engineering disciplines.
9. Understand the role of graphics in the development of ideas and in the communication of information.

Required Materials

Course Textbook

Modern Graphics Communications. Fifth edition, by Shawna E. Lockhart, Marla Goodman, & Cindy Johnson, 2018. *ISBN-13: 978-0134848716 ISBN-10: 0134848713*

Course Tools

Essential Tools

T-Square (Minimum 18")

Triangle (45-45-90 degrees, around 8")

Mechanical Pencils (0.5 and 0.7mm preferred)

Engineer's Scale (inches divide into tenths)

Full Kit (Does not include T-square)

Alvin® Basic Beginner's Drafting Engineers' Kit

Coursework

1. Assignments- Assignments will be a combination of classwork and homework. The complete list of assignments can be found on the right side of your Moodle home page.
2. Final Project- Your final project is a complete set of technical working drawings and the supporting sketches and supporting technical documentation.
3. Portfolio- The portfolio will be a collection of your coursework over the semester.

Assessment

Grades will be weighted and graded as follows:

Assignments 60%

Portfolio 10%

Final Project 30% (Due Thursday December 6th)

<u>Grading Scale:</u>

90-100% A

80-89% B

70-79% C

60-69% D

Grades will be updated and entered into Moodle at the end of each week.

Topic Outline

1. Design Process
2. Layouts and Lettering
3. Technical Sketching
4. Orthographic Projection
5. 2D Drawing Representation
6. Sectional Views
7. Auxiliary Views
8. Manufacturing
9. Dimensioning
10. Tolerances
11. Fasteners
12. Working Drawings
13. Final Project

Academic Integrity:

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at: Student Conduct Code. Using the Web to research materials and concepts is an integral part of learning in the twenty-first century. Studying with other students is a productive method of learning. A certain amount of collaborating on concepts with other students and using resources found on the Internet in an assignment is recommended. Copy and paste is not acceptable. It is expected that each student will input his/her assignment into the computer, and each student must be able to explain any assignment turned in. Collaboration on exams is strictly forbidden.

Dropping and Adding Courses or Changing Sections, Grading or Credit Status

University Policy for dropping courses or requesting grading/credit status changes can be found in the catalog: Add/Drop Policy. Students should become familiar with all academic policies.

For Complete Academic Policies Please View the UM Catalog at: Academic Policies.

Disability Accommodations:
Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disability Services website at http://www.umt.edu/dss. Or call 406.243.2243 (voice/ text).

Changes to Syllabi:
NOTE: Instructor reserve the right to modify syllabi and assignments as needed based on faculty, student, and/or environmental circumstances. If changes are made to the syllabus, amended copies will be dated and made available to the class.

Cell Phone and other Electronic Communication Devices Policy:
All electronic communication devices must be tuned off and stowed away prior to the start of class.

Attendance Policy:
Regular classroom attendance is expected.

Exam, Project, and Assignment Policy:
All exams are to be taken on the assigned date and time. Projects and assignments are due at the start of class on the assigned date and time. Late assignments will be accepted at the instructor's discretion. Rescheduling of an exam will be approved at the discretion of the instructor and only in extraordinary situations.

Learning Management System:
It is the responsibility of the student to access and familiarize herself/himself with the Learning Management System (LMS) for the course (Moodle). Access & training is available through UMOnline http://umonline.umt.edu